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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,070	07/17/2001	Felix Missel	38146	1271
29569	7590	10/28/2004	EXAMINER	
JEFFREY FURR 253 N. MAIN STREET JOHNSTOWN, OH 43031				QURESHI, AFSAR M
		ART UNIT		PAPER NUMBER
				2667

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/682,070	MISSEL, FELIX	
	<b>Examiner</b>	<b>Art Unit</b>	
	Afsar M Qureshi	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 21 July 2004.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 15-23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 15-23 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 17 July 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

***Response to Amendment***

1. Responsive to amendment received on July 21, 2004, cancelled claims 1-14, and added new claims 15-23, as requested.

***Abstract***

2. The abstract of the disclosure is objected to because it includes title of the disclosure. The title of the disclosure should be removed, leaving '**Abstract of Disclosure**' as heading. Correction is required. See MPEP § 608.01(b).

***Specification***

3. The disclosure is objected to because of the following informalities:
  - (i) Brackets should be removed from the title of the disclosure.
  - (ii) 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The entire specification is replete with grammatical errors and terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph.

Examples of some unclear, inexact or verbose terms used in the specification are:

- "Background of Invention", prior to paragraph [0001] should be deleted,

- in paragraph [0004] “BACKGROUND DISCUSSION OF PRIOR ARTA RF...” has no spaces,
- in paragraph [0006], line 3, “...capable of send a message hopping...” is not clear,
  - in paragraph [0007], line 5, “...Dynamical routing based routes dynamically the messages, ...” is not clear; line 11, “...used 5,682,379...” is not clear. If it is referring to a U.S. Patent then it should be written as -- see U.S. Patent number 5,682,379 --. Similarly, in line 13, it is not clear what “...8-BMC (114)...” is referring to.

**(iii) A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. A statement that it contains no new matter must accompany the substitute specification filed.**

## **Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
- (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing: See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

***Claims***

4. Claims 15-23 are objected to because of the following informalities:

Similar to Disclosure, all claims have grammatical errors,

*for example:*

° in claim 15, line 16, “ Processing a message to a node from the network to a serial ? by receiving...”, also, in line 17, “...storing the message ? the auxiliary buffer...” is not clear.

° in claim 19, line 2, “...one interface is node to serial device and one interface *is a to the net ...*” is unclear, plus, there is no antecedent of “the net”.

In addition to these errors, other errors (and typographical errors) such as [nodes”, instead of node’s - as pointed out in the earlier Office action].

Appropriate corrections of all claims are required.

***Drawings***

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because informal drawing were submitted with the application. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Please note the Draftsperson's Patent Drawing Review (PTO 948) mailed with Office action, dated January 21, 2004.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,926,101 issued to Dasgupta in view of the paper, titled, "A Routing Protocol for Packet Radio Networks", written by Murthy et al.

Regarding claims 15 and 20, Dasgupta discloses a method and a system for managing the routing of a multi-hop network based on low performance micro-controllers, comprising:

Having a node with a micro-controller means, a RF transceiver means, data storage means, a network interface means with an input buffer, output buffer and auxiliary buffer and a serial device communication means. See fig. 1 references 10 and 30, and col. 3, lines 15 to 52.

Having the data storage means store a plurality of node addresses and configuration data. See fig. 1 references 14, 34, and RAM.

Having a plurality of serial devices. See fig. 1 references 42(SERIAL PORT).

Processing a message to a node from the serial device to network by receiving the message from the serial device, storing the message in the input buffer, copying the message to the output buffer, and transmitting the message to the network. Processing a message to a node from a serial device to the same serial device by receiving the message from the serial device, storing the message in the input buffer, copying the message to the output buffer and transmitting the message to the serial device. Processing a message to a node from the network to a serial by receiving the message from the input buffer, storing the message the auxiliary buffer, copying the message to the output buffer, and transmitting the message to the serial device. And processing a message to a node from the network to the network by receiving the message from the input buffer, storing the message in the auxiliary buffer, copying the message to the output buffer, and transmitting the message to the network. See fig. 2 references 62 to 76, and col. 3, line 64 to col. 4, line 10, and lines 23 to 29.

Processing a message by having a sender node send the message, having a plurality of nodes receive and re-transmit the message until the destination node receives the message. See col. 4, line 52 to col. 5, line 2.

Processing a message from the network to a node by comparing the node's address with the destination node address; if the address does not match, the message is a retransmission message and the node searches for the next node and retransmits the message, if the address matches, the message is

tested to determine if the message is a network command, if the message is a network command, the network command will be executed by the node, if the message is not a network command, the message is sent to the serial device, if an acknowledgement is required the node sends a request response message to the serial device, after the node receives the acknowledgement from serial device the node sends an acknowledgement to the sender node. See fig. 7 references 150, 160, 162, and 164, and col. 6, lines 17 to 24, and lines 30 to 35.

Furthermore, Dasgupta discloses the messages contain a header at the beginning of the message with sender and destination node addresses (see fig. 4 references 106 and ADDRESS, and col. 5, lines 33 to 36).

Dasgupta does not disclose the header contains transmitter and receiver node addresses, and, setting up an address table automatically ....

However, Murthy et al. discloses a router message exchange format among nodes having a plurality of addresses in the header for storing transmitter and receiver node addresses (see page 89, section 2.3, Information Exchange among Nodes, lines 7 to 11). Murthy et al. further disclose the steps including setting up an address table automatically by a node send a message to all of the nodes on the network, having the nodes send acknowledge messages to the sender node, having the sender node sort the nodes by the nodes' addresses and loading the addresses into an address table, then the sender sends messages to each node in the network to include the sender node's address in the other node's address tables (see page 89, section 2.4, Routing Table Updating, lines 1 to 16).

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate intermediate node addresses, such as the transmitter and receiver addresses, into the header so that the address of the intermediate node can be compared to the destination address to make a complete packet routing decisions in a system that connects a network of low cost, minimal resource nodes wirelessly as taught by Dasgupta (see col. 2, lines 15 to 20, and lines 39 to 41).

Regarding claim 16, Dasgupta further discloses the micro-controller means is an 8-bit micro-controller (see fig. 1 references 12, 32, and MPU, and col. 3, lines 25 to 29).

Regarding claims 17, 18, 21 and 22, in addition to other limitations as discussed in the rejection of claims 15, 20 above, Dasgupta further discloses the serial device is a computer or a DSU (The node of the instant invention is same as serial device as admitted in the Specification). See fig. 1, references 42 (SERIAL PORT), and 44(COMPUTER).

Regarding claims 19 and 23, Dasgupta further discloses the network interface means consists of an input buffer and an output buffer located internal on the micro-controller means (see fig. 1 references 14, 34, and RAM).

***Response to Arguments***

7. Applicant's arguments filed on July 21, 2004, do not include the differences between the cited art and the claimed invention, explicitly pointing out what claimed limitations not disclosed by the cited art. The Examiner believes all the limitations, claimed herein, are addressed and disclosed by the cited references as discussed in the above rejection.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M Qureshi whose telephone number is (571) 272 3178. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272

3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**AFSAR QURESHI**  
**PATENT EXAMINER**

October 26, 2004.